

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-8 (Canceled).

Claim 9 (Original): A vibrator filter comprising:

a substrate;

an input terminal electrode and an output terminal electrode formed on the substrate with a predetermined spacing therebetween and each having a side face; and

a vibrator formed on the substrate between the input terminal electrode and the output terminal electrode, the vibrator having a moving portion with at least two side faces one of which is opposed to the side face of the input terminal electrode and another of which is opposed to the side face of the output terminal electrode, with a small gap respectively, and a pillar fixed to the substrate to support the moving portion.

Claim 10 (Original): The vibrator filter according to claim 9, wherein each of the input terminal electrode, the output terminal electrode and the moving portion is formed of a polysilicon layer which is patterned into a rectangular shape and the pillar is divided into a plurality of sub-pillars to support the moving portion.

Claim 11 (Original): The vibrator filter according to claim 9, wherein a vibrating frequency is in inverse proportion to $l^{3/2}$ wherein l is a length of the pillar.

Claim 12 (Original): The vibrator filter according to claim 9, wherein a vibrating frequency is in inverse proportion to $h^{1/2}$ wherein h is a thickness of a moving portion.

Claim 13 (Original): A method of manufacturing a micromechanical switch comprising:

- forming a sacrificial layer over a surface of a substrate;
- forming a polysilicon layer on the sacrificial layer;
- selectively etching the polysilicon layer to form a pair of beam members placed in proximity to each other and a driving electrode placed between the beam members, each of the beam members having a fixing portion configured to fix at least one end thereof to the substrate and a moving portion extending from the fixing portion;
- forming a metal or metal compound layer so as to cover the beam members and the driving electrode;
- selectively etching the metal or metal compound layer so that the metal or metal compound layer is left on the beam members and the driving electrode; and
- etching away the sacrificial layer existing at least under the moving portion of each of the beam members.

Claim 14 (Original): The method according to claim 13, wherein the forming of the beam members and the driving electrode includes forming at least one opening in a portion of each of the beam members which reaches the sacrificial layer.

Claim 15 (Original): The method according to claim 13, between the etching of the metal or metal compound layer and the etching away of the sacrificial layer, further comprising etching the metal or metal compound layer and the beam members to form at least one opening reaching the sacrificial layer.

Claim 16 (Original): The method according to claim 13, wherein the etching away of the sacrificial layer includes etching the sacrificial layer under the moving portions through the at least one opening formed in the metal or metal compound layer and the beam members.

Claim 17 (Original): A method of manufacturing a vibrator filter comprising:
forming a sacrificial layer over a surface of a substrate to have a first, a second and a third opening;
depositing a conductor layer on the sacrificial layer;
patterning the conductor layer to form an input terminal electrode, an output terminal electrode, and a vibrator having a moving portion with at least two side faces and a pillar, the input terminal electrode and the output terminal electrode being placed with a predetermined spacing therebetween and fixed to the substrate through the first and the second opening, and the vibrator being placed between the input terminal electrode and the output terminal electrode so that one of the side faces of the moving portion is opposed to a side of the input terminal electrode and another of the side face is opposed to a side of the output terminal electrode, with a small gap respectively, and is held above the substrate by the pillar formed in the third opening; and
removing the sacrificial layer.

Claim 18 (Original): The method according to claim 17, the depositing a conductive layer includes depositing at least one material selected from the group consisting of polysilicon, metal and metal compound.

Claim 19 (Original): The method according to claim 17, the patterning the conductive layer includes patterning the input terminal electrode, the output terminal electrode and the moving portion in a shape of rectangle.

Claim 20 (Original): The method according to claim 17, wherein the pillar is formed of a plurality of sub-pillars.